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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,745	04/21/2004	Michael L. Whitehead	4011	5487
63151 7590 09/08/2009 LAW OFFICE OF MARK BROWN, LLC 4700 BELLEVIEW SUITE 210 KANSAS CITY, MO 64112				
EXAMINER				
ISSING, GREGORY C				
ART UNIT		PAPER NUMBER		
3662				
MAIL DATE		DELIVERY MODE		
09/08/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/828,745

**Applicant(s)**

WHITEHEAD ET AL.

**Examiner**

Gregory C. Issing

**Art Unit**

3662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 60-67 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 60-67 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 60-67 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement and the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. *The computing means for determining the GNSS-defined position* as claimed is not sufficiently disclosed in the specification to enable someone skilled in the art to make and/or use the same. The computing means for computing the GNSS-defined position represents new matter.
3. The applicants argue that Appendix A is sufficient to show the support for the claimed subject matter wherein the instant specification and the Rule 1.131 declarations submitted with the amendment of April 28, 2008 provide the support for the claimed subject matter. Firstly, it is noted that a declaration under 1.131 is effective for swearing behind a prior art reference in a prior art rejection but it is not effective for a showing of enablement/written description. The patent application must stand on its own. Thus, the applicants' arguments directed to the use of the declaration to provide support for claim limitations not found in the specification of the instant application are not persuasive. Secondly, the portion of the specification dealing with the use of multiple antennas to compute a solution of a single point on a rigid body to which they are attached is only described in paragraph [0050], starting at page 18 in the instant specification

(alternatively PG PUB 2004/0122533 describes such at [0056]). Examiner cannot find a disclosure therein which describes the claimed subject matter in a manner to enable someone skilled in the art to make and/or use the claimed subject matter. For example, the cited portions from 2004/0122533 of [0056] are silent with respect to (1) “determining a GNSS-defined position of a single point fixedly positioned on a slow-moving mobile structure,” (2) “mounted with known geometry and distances relative to each other and to said single point,” (3) “an orientation device mounted on said structure for determining an orientation of said structure,” (4) computing means using “known relative orientation and fixed distances and geometry of antennas relative to each other and the structure,” (5) computing means using “known relative orientation and fixed distances and geometry of said single point relative to the antennas and to the structure,” and (6) computing means using “orientation of the structure.” The cited portion [0056] merely cites that *multiple antennas could be used to compute a solution of a single point on a rigid body . . . using known geometry and distances*. Additionally, the compass is utilized to provide an orientation for removing an unknown from the relative location of the two (Master/slave) receivers; this fails to disclose determination of the orientation of the structure or how the orientation of the structure is used in the computation of a single point fixedly positioned on the structure. There is nothing in the specification that describes expressly the computation of the GNSS-defined position of a single point fixedly positioned using the claimed inputs of GNSS signals, known relative orientation and fixed distances and geometry of antennas relative to each other and to the structure, known relative orientation and fixed distances of said single point relative to said antennas and to said structure, and an orientation of the structure. Furthermore, there is nothing in the specification to describe or enable the limitation of claims 61

and 65 for use of “a single differencing technique based on said known distance and geometry relation for resolving a carrier phase GNSS signal integer ambiguity in an embodiment wherein neither GNSS receiver is capable of provide enough information to compute a location”; in fact the specification states “advantageously, a position solution . . . would not . . . utilize carrier-phase based differencing.” Lastly, the specification does not disclose the limitation set forth in claims 63 and 67 of the “slow-moving mobile structure” being a “terrestrial vehicle.” The applicants’ arguments have been considered but are not persuasive to overcome the rejection of the claims under 35 USC 112, paragraph 1.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 60-67 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. In claims 60 and 64, the language “a single point fixedly positioned on a slow-moving, mobile platform” is indefinite since there is nothing in the specification or claims that sets forth the metes and bounds of such feature. It is unclear what limitation is imposed by the language “mounted in fixed relation with known geometry and distances relative to each other and to said single point” particularly in light of the lack of disclosure of such in the application. The specification merely describes computation of a solution using known geometry and distances but is absolutely silent with respect to the single point. The “orientation device mounted on said structure for determining an orientation of said structure” is indefinite since it appears to be misdescriptive; the specification describes the use of a compass to give orientation with respect

to the two antenna locations, i.e. to remove an unknown from the relative location of the two receivers. There is nothing to describe the use of the compass to determine the orientation of the structure nor is there anything to describe in a clear manner the use of the orientation to compute the GNSS-defined position of the single point. Lastly, the computing means for determining the GNSS-defined position of the single point is indefinite since the claim fails to clearly and distinctly set forth how the position of the single point is determined from the respective inputs (1) to (4).

7. In claim 61, the language “uses a single differencing technique based on said known distance and geometry relation . . . for resolving . . . integer ambiguity” fails to clearly and distinctly set forth any structural limitations for carrying out the step and is nothing described in the specification which corresponds to such structure. Claims 61 and 63 are indefinite since the said language fails to clearly and distinctly set forth the metes and bounds of the subject matter.

8. The prior art rejection is withdrawn since it is deemed that the instant claims are not supported by the specification as filed and thus the scope of the claimed method and apparatus are not properly ascertainable.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory C. Issing whose telephone number is (571)-272-6973. The examiner can normally be reached on Monday - Thursday 6:00 AM- 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on (571)-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gregory C. Issing/  
Primary Examiner  
Art Unit 3662